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**TRANSMITTAL  
FORM**

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Total Number of Pages in This Submission

84

Application Number

09/900,442

Filing Date

July 6, 2001

First Named Inventor

Reithmeyer, Joseph G.

Art Unit

3634

Examiner Name

Strimbu, Gregory J.

Attorney Docket Number

A202 1310

**ENCLOSURES (Check all that apply)**☐

Fee Transmittal Form

☐

Fee Attached

☐

Amendment/Reply

☐

After Final

☐

Affidavits/declaration(s)

☐

Extension of Time Request

☐

Express Abandonment Request

☐

Information Disclosure Statement

☐

Certified Copy of Priority Document(s)

☐Reply to Missing Parts/  
Incomplete Application☐Reply to Missing Parts  
under 37 CFR 1.52 or 1.53☐

Drawing(s)

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Licensing-related Papers

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Petition

☐Petition to Convert to a  
Provisional Application☐Power of Attorney, Revocation  
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After Allowance Communication to TC

☐Appeal Communication to Board  
of Appeals and Interferences☒Appeal Communication to TC  
(Appeal Notice, Brief, Reply Brief)☐

Proprietary Information

☐

Status Letter

☒Other Enclosure(s) (please identify  
below):Transmittal of Substitute Amended Appeal  
Brief; Certificate of Express Mailing; Return  
Postcard

Remarks

**SIGNATURE OF APPLICANT, ATTORNEY, OR AGENT**

Firm Name

Womble Carlyle Sandridge &amp; Rice, PLLC

Signature

Printed name

Keats A. Quinalty

Date

April 29, 2005

Reg. No.

46,426

**CERTIFICATE OF TRANSMISSION/MAILING**

I hereby certify that this correspondence is being facsimile transmitted to the USPTO or deposited with the United States Postal Service with sufficient postage as first class mail in an envelope addressed to: Commissioner for Patents, P.O. Box 1450, Alexandria, VA 22313-1450 on the date shown below:

Signature

Typed or printed name

Jo M. Jones

Date

April 29, 2005

This collection of information is required by 37 CFR 1.5. The information is required to obtain or retain a benefit by the public which is to file (and by the USPTO to process) an application. Confidentiality is governed by 35 U.S.C. 122 and 37 CFR 1.11 and 1.14. This collection is estimated to 2 hours to complete, including gathering, preparing, and submitting the completed application form to the USPTO. Time will vary depending upon the individual case. Any comments on the amount of time you require to complete this form and/or suggestions for reducing this burden, should be sent to the Chief Information Officer, U.S. Patent and Trademark Office, U.S. Department of Commerce, P.O. Box 1450, Alexandria, VA 22313-1450. DO NOT SEND FEES OR COMPLETED FORMS TO THIS ADDRESS. SEND TO: Commissioner for Patents, P.O. Box 1450, Alexandria, VA 22313-1450.

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Patents

**IN THE UNITED STATES PATENT AND TRADEMARK OFFICE**

In re application of:	)	
	)	Examiner: Strimbu, Gregory J.
Reithmeyer et al.	)	
	)	Art Unit: 3634
Serial No.: 09/900,442	)	
	)	Attorney Docket No.: A202 1310
Filed: July 6, 2001	)	
	)	
For: ADJUSTABLE DOOR WITH	)	
SEALED THRESHOLD, HINGE	)	
AND FRAME	)	

**CERTIFICATE OF EXPRESS MAILING**

Commissioner for Patents  
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Alexandria, VA 22313-1450

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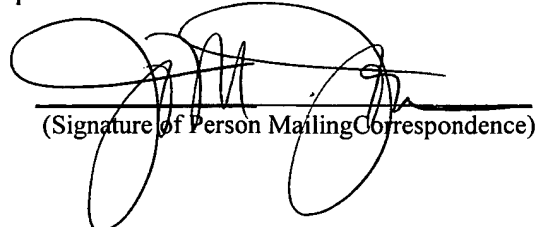
Transmittal Form;  
Transmittal of Substitute Amended Appeal Brief;  
Substitute Amended Appeal Brief (in triplicate)  
Return Postcard

Womble Carlyle Sandridge & Rice, PLLC  
P.O. Box 7037  
Atlanta, GA 30357-0037  
(404) 879-2423 (Telephone)  
(404) 879-2923 (Facsimile)

Docket No.: A202 1310

I hereby certify that all correspondences listed above are being deposited for delivery to the above addressee, with the United States Postal Service under 37 CFR 1.10 on April 29, 2005. The envelope has been given U.S. Postal Service "Express Mail Post Office To Addressee" Package #EV 377646037 US.

Jo M. Jones  
(Printed Name of Person Mailing Correspondence)

  
(Signature of Person Mailing Correspondence)



UNITED STATES PATENT AND TRADEMARK OFFICE  
BOARD OF PATENT APPEALS AND INTERFERENCES

In Re Application of: ) Examiner: Strimbu, Gregory J.  
Reithmeyer et al. ) Art Unit: 3634  
Serial No.: 09/900,442 ) Attorney Docket No.: A202 1310  
Filed: July 6, 2001 )  
For: ADJUSTABLE DOOR WITH SEALED )  
THRESHOLD, HINGE AND FRAME )

TRANSMITTAL OF SUBSTITUTE AMENDED APPEAL BRIEF

1. Transmitted herewith is the SUBSTITUTE AMENDED APPEAL BRIEF in support of the Notification of Non-Compliance with 37 C.F.R. 41.37 dated April 1, 2005.

2. STATUS OF APPLICANT

This application is on behalf of  
[X] other than a small entity.

3. FEE FOR FILING APPEAL BRIEF

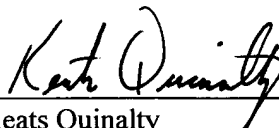
Pursuant to 37 C.F.R. 1.17(c), the fee for filing the Appeal Brief is  
[X] other than a small entity \$340.00

APPEAL BRIEF FEE DUE \$340.00

4. FEE PAYMENT

[ X ] The \$340.00 filing fee was enclosed with the Appeal Brief filed on September 22, 2004.  
[ X ] The Commissioner is hereby authorized to charge any additional fees which may be required or credit any overpayment to deposit account no. 09-0528.

April 29, 2005  
Date

  
Keats Quinalty  
Registration No. 46,426

WOMBLE CARLYLE SANDRIDGE & RICE, PLLC  
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05/03/2005 AWONDAF1-00000035 090528- 09900442

01-FC-1402 -500.00-BA



05-02-05

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3634  
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PATENT

**IN THE UNITED STATES PATENT AND TRADEMARK OFFICE  
BOARD OF PATENT APPEALS AND INTERFERENCES**

In re Application of: Reithmeyer et al.	)	Examiner: Strimbu, Gregory J.
	)	
Serial No.: 09/900,442	)	Art Unit: 3634
	)	
Filed: July 6, 2001	)	Attorney Docket No.: A202 1310
	)	
For: ADJUSTABLE DOOR WITH SEALED	)	
THRESHOLD, HINGE AND FRAME	)	
	)	

**SUBSTITUTE AMENDED APPEAL BRIEF**

Mail Stop Appeal Brief-Patents  
Commissioner for Patents  
P.O. Box 1450  
Alexandria, VA 22313-1450

Sir:

This Substitute Amended Appeal Brief is submitted in triplicate pursuant to 37 C.F.R. 1.192 in support of the Notice of Non-Compliance with 37 CFR 1.192(c) dated April 1, 2005.

**1. REAL PARTY IN INTEREST**

The real party in interest in the present application is Andersen Corporation, the assignee of the present application.

**2. RELATED APPEALS AND INTERFERENCES**

There are no other appeals or interferences known to Appellant, or Appellant's legal representatives, that directly affect, will be directly affected by, or have a bearing on the Board's decision in the pending Appeal.

05/03/2005 AWONDAF1 00000035 09900442

01 FC:1402 500.00 DA

3. **STATUS OF CLAIMS**

Claims 1-15, 40-44, and 47-48 are pending in the application, with claims 16-39 having been withdrawn from further consideration by the Examiner under a restriction requirement. A copy of the claims as currently pending are set forth in the attached Appendix.

4. **STATUS OF AMENDMENTS**

On June 22, 2004, Appellants filed a Notice of Appeal of the April 29, 2004 Final Office Action. No other amendments or responses have been filed in response to the April 29, 2004 Office Action.

5. **SUMMARY OF CLAIMED SUBJECT MATTER**

In accordance with 37 CFR § 41.37, a concise explanation of the subject matter defined in each of the independent claims involved in the Appeal is set forth below in tabular format.

References to pages and lines of the specification are designated “page: lines” and references to the drawings are indicated by reference characters.

1. An entryway system that can adjust a slab mounted within a frame and maintain a sealed system to exterior weather when closed, the entryway system comprising:	In light of these apparent problems in the art, <b>the invention claimed herein provides an improved entry door system that comprises an easily adjustable door slab that can be positioned to maintain an adequate weather seal</b> , an threshold member that provides a base for a weather seal for the door, a water management system comprising the threshold member and end cap corner key system that prevents penetration of water to the interior of the house and protection for wooden framing members in the door system from the adverse effects of water. [3:22-3:27]
(a) the frame comprising a peripheral weather strip positioned substantially on the entirety of both sides and the bottom of the frame, the frame bottom additionally comprising a threshold member joined to the frame with an end cap corner key positioned between the	The end cap corner key 120 mechanically maintains an adequate watertight joint when installed on the threshold 100 holding the gasket 110 in place of the edge 111. The matching edge 111a forms a water tight seal on the entirety of the periphery of the threshold

frame and the threshold member, the threshold member forming a tank such that the threshold member can accumulate and drain environmental water to the exterior of the frame; and

edge 111. A matching gasket end cap corner key 120 and vertical jamb 130 is installed on the opposite end of the threshold 100. The frame of the door is typically completed by joining the tops of the mated jambs 130 with a top plate (not shown). The threshold 100 of the invention typically is made from an extrudable material including metals, plastic, composites and other materials. On the threshold, an interior trim piece 101 is placed upon a trim stage 101a coextruded into the threshold 100. On the opposite exterior portion of the threshold 100 is an exterior edge 102 that contains an exterior drain and grille 106 that permits the interior water tank 104 to drain to the exterior of the threshold and dwelling through the internal threshold drain 105. **This combination of tank 104, internal drain 105 and the exterior drain 106 permits the threshold of the invention to maintain an adequate barrier to the penetration of wind drive (up to approximately 35 to 40 mph) rain or water through the threshold at a wind driven pressure of about 3 to 3.5 lb-ft.**

<sup>2</sup> The column of water buildup in tank 102 provides a column or head of water that causes a difference in pressure **resulting in water exiting from threshold 102 from tank 104 and through drains 105 and 106.** A water tight seal between the threshold 100 and frame 130 of the invention is maintained using a V-shaped weather strip 103 in the horizontal plane of the threshold and 103a in the vertical plane of the jamb. **When the slab (not shown) is closed against the horizontal weather strip 103 and the vertical weather strip 103a, weather tight and substantially air tight seal is formed as the V-shaped weather strip is compressed against the threshold 100 or the vertical jamb 130.** At the transition of the vertical weather strip 103a to the horizontal weather strip 103, the bottom of the strip 103a is notched to permit the weather strip 103 to fit into and seal the corner of the frame to the movement of cold air or

	moisture into the interior of the door. When the door is closed the horizontal strip is compressed and as a result moves in the vertical dimension. [6:2-7:4]
(b) the slab including an adjustable hinge, said hinge being vertically and horizontally adjustable to sealingly match the slab periphery to the peripheral weather strip	The entryway system comprises a <b>slab</b> mounted on a hinge to form a door within the frame. <b>The hinges used in the entryway system are adjustable both vertically and horizontally to ensure the slab matches the frame opening and the weather strip system.</b> [4:11-4:13]
40. An entryway system that can adjust a slab within a frame and maintain a sealed system to exterior weather when closed, the system comprising an entryway comprising:	In light of these apparent problems in the art, <b>the invention claimed herein provides an improved entry door system that comprises an easily adjustable door slab that can be positioned to maintain an adequate weather seal</b> , an threshold member that provides a base for a weather seal for the door, a water management system comprising the threshold member and end cap corner key system that prevents penetration of water to the interior of the house and protection for wooden framing members in the door system from the adverse effects of water. [3:21-3:27]
(a) the frame comprising a header, a threshold, an end cap corner key, and at least one jamb, the threshold including:	<b>A matching gasket end cap corner key 120 and vertical jamb 130 is installed on the opposite end of the threshold 100. The frame of the door is typically completed by joining the tops of the mated jambs 130 with a top plate (not shown).</b> [6:5-6:8]
(i) a water tank configured to drain environmental water to the exterior of the frame; and	On the opposite exterior portion of the threshold 100 is <b>an exterior edge 102 that contains an exterior drain and grille 106 that permits the interior water tank 104 to drain to the exterior of the threshold and dwelling through the internal threshold drain 105.</b> This combination of tank 104, internal drain 105 and the exterior drain 106 permits the threshold of the invention to maintain an adequate barrier to the penetration of wind drive (up to approximately 35 to 40 mph) rain or water through the threshold at a wind driven pressure of about 3 to 3.5 lb-ft. <sup>-2</sup> The column of water buildup in tank 102 provides a column or head of water that causes

	a difference in pressure resulting in water exiting from threshold 102 from tank 104 and through drains 105 and 106. [6:11-6:19]
(ii) a sealing element positioned between the end cap corner key and the water tank to seal the water tank; and	<p><b>When assembled, the gasket 110 forms a water tight seal as the edge 111 of the threshold 100 matches the matching edge shape 111a of the gasket 110. [5:27-5:28]</b></p> <p><b>The end cap corner key 120 mechanically maintains an adequate watertight joint when installed on the threshold 100 holding the gasket 110 in place of the edge 111. [6:2-6:3] See 110 in Fig. 1 between end cap 120 and water tank 104.</b></p>
(b) the slab mounted on the frame, said slab comprising a mortised hinge arrangement, said arrangement comprising a shim and a two-knuckle hinge, the two-knuckle hinge being adjustable in the vertical dimension.	<p>In Figure 8, the hinge 800 includes a hinge plate 804 containing fastener aperture 803 to install the hinge plate 804 and hinge 800 in the transition block 200 of the invention. In such an installation, <b>a fastener passes through aperture 203 through shim 700 and transition block 200 into the jamb (not shown). The upper hinge 810 is installed in the door edge. The door comprises the upper hinge 810 that rests upon pin 802 of the hinge 800. After the hinge, shim and block are assembled in the door and jamb respectively, the upper hinge 810 (see Figures 11 and 12) is supported by the lower hinge 800 and hinge pin 802. Hinge pin 802 is inserted into the barrel or upper portion 811 of the two knuckle hinge 810 of the invention. Depending on the perspective of the view, the upper portion 810 on the door is placed over the hinge pin 802 or the pin 802 is inserted into the barrel or upper (or insert) portion 811 of the upper portion hinge 810. Once inserted, the upper portion 810 on the door can rotate upon pin 802 in the jamb through the full motion required in appropriate door operation. Pin 802 is assembled into the lower portion 804 of the two knuckle hinge 800 of the invention using the pin support 801. The pin support 801 surrounds the pin 802 and provided an installation location for a height adjustment means 805 that adjusts</b></p>



	<b>door for appropriate installation purposes.</b> [11:16-12:2]
<p>47. An entryway system comprising:</p> <p>(a) a frame including a header, side jambs, and a threshold, each of the header, side jambs, and threshold defining a perimeter, the threshold including a water tank configured to accumulate and drain environmental water to an exterior of the frame;</p>	<p>The end cap corner key 120 mechanically maintains an adequate watertight joint when installed on the threshold 100 holding the gasket 110 in place of the edge 111. The matching edge 111a forms a water tight seal on the entirety of the periphery of the threshold edge 111. A matching gasket end cap corner key 120 and vertical jamb 130 is installed on the opposite end of the threshold 100. The frame of the door is typically completed by joining the tops of the mated jambs 130 with a top plate (not shown). The threshold 100 of the invention typically is made from an extrudable material including metals, plastic, composites and other materials. On the threshold, an interior trim piece 101 is placed upon a trim stage 101a coextruded into the threshold 100. On the opposite exterior portion of the threshold 100 is an exterior edge 102 that contains an exterior drain and grille 106 that permits the interior water tank 104 to drain to the exterior of the threshold and dwelling through the internal threshold drain 105. <b>This combination of tank 104, internal drain 105 and the exterior drain 106 permits the threshold of the invention to maintain an adequate barrier to the penetration of wind drive (up to approximately 35 to 40 mph) rain or water through the threshold at a wind driven pressure of about 3 to 3.5 lb-ft.<sup>2</sup></b> The column of water buildup in tank 102 provides a column or head of water that causes a difference in pressure <b>resulting in water exiting from threshold 102 from tank 104 and through drains 105 and 106.</b> A water tight seal between the threshold 100 and frame 130 of the invention is maintained using a V-shaped weather strip 103 in the horizontal plane of the threshold and 103a in the vertical plane of the jamb. <b>When the slab (not shown) is closed against the horizontal weather strip 103 and the vertical weather strip 103a, weather tight and substantially</b></p>

	<p><b>air tight seal is formed as the V-shaped weather strip is compressed against the threshold 100 or the vertical jamb 130.</b> At the transition of the vertical weather strip 103a to the horizontal weather strip 103, the bottom of the strip 103a is notched to permit the weather strip 103 to fit into and seal the corner of the frame to the movement of cold air or moisture into the interior of the door. When the door is closed the horizontal strip is compressed and as a result moves in the vertical dimension. [6:2-7:4]</p>
(b) first and second end caps secured to first and second ends of the threshold;	<p><b>The exploded view of Figure 1 demonstrates the use of the transitional end cap corner key 120 to form a mechanically secure joint between the vertical side jamb or sash 130 and the threshold 100.</b> [5:25-5:27]</p>
(c) a seal positioned along the perimeter of the frame;	<p><b>A water tight seal between the threshold 100 and frame 130 of the invention is maintained using a V-shaped weather strip 103 in the horizontal plane of the threshold and 103a in the vertical plane of the jamb.</b> [6:25-6:27]</p>
(d) a door mounted on the frame, the door including a mortised hinge arrangement adjustable in a horizontal direction and a vertical direction to provide sealing contact between the door and the seal positioned along the perimeter of the frame, the mortised hinge arrangement including:	<p>In Figure 8, the hinge 800 includes a hinge plate 804 containing fastener aperture 803 to install the hinge plate 804 and hinge 800 in the transition block 200 of the invention. <b>In such an installation, a fastener passes through aperture 203 through shim 700 and transition block 200 into the jamb (not shown). The upper hinge 810 is installed in the door edge.</b> The door comprises the upper hinge 810 that rests upon pin 802 of the hinge 800. After the hinge, shim and block are assembled in the door and jamb respectively, the upper hinge 810 (see Figures 11 and 12) is supported by the lower hinge 800 and hinge pin 802. Hinge pin 802 is inserted into the barrel or upper portion 811 of the two knuckle hinge 810 of the invention. Depending on the perspective of the view, the upper portion 810 on the door is placed over the hinge pin 802 or the pin 802 is inserted into the barrel or upper (or insert) portion 811 of the upper portion hinge 810. Once inserted, the upper portion</p>

	<p>810 on the door can rotate upon pin 802 in the jamb through the full motion required in appropriate door operation. Pin 802 is assembled into the lower portion 804 of the two knuckle hinge 800 of the invention using the pin support 801. <b>The pin support 801 surrounds the pin 802 and provided an installation location for a height adjustment means 805 that adjusts the height of the door or the y-axis of the door for appropriate installation purposes.</b> [11:16-12:2]</p> <p>Figures 2-6 are various views of the transition block for the shim adjustment of the invention. <b>The transition block is installed in a recess in the door slab, the horizontal adjustment occurs as a shim is placed between the hinge and the transition block.</b> [9:11-9:14]</p>
(i) a transition block mounted to the door;	<p><b>In Figure 8, the hinge 800 includes a hinge plate 804 containing fastener aperture 803 to install the hinge plate 804 and hinge 800 in the transition block 200 of the invention.</b> In such an installation, a fastener passes through aperture 203 through shim 700 and transition block 200 into the jamb (not shown). The upper hinge 810 is installed in the door edge. The door comprises the upper hinge 810 that rests upon pin 802 of the hinge 800. After the hinge, shim and block are assembled in the door and jamb respectively, the upper hinge 810 (see Figures 11 and 12) is supported by the lower hinge 800 and hinge pin 802. Hinge pin 802 is inserted into the barrel or upper portion 811 of the two knuckle hinge 810 of the invention. Depending on the perspective of the view, the upper portion 810 on the door is placed over the hinge pin 802 or the pin 802 is inserted into the barrel or upper (or insert) portion 811 of the upper portion hinge 810. Once inserted, the upper portion 810 on the door can rotate upon pin 802 in the jamb through the full motion required in appropriate door operation. Pin 802 is assembled into the lower portion 804 of the two knuckle hinge</p>

	800 of the invention using the pin support 801. The pin support 801 surrounds the pin 802 and provided an installation location for a height adjustment means 805 that adjusts the height of the door or the y-axis of the door for appropriate installation purposes. [11:16-12:2]
(ii) a shim positioned adjacent to the transition block; and	In Figure 8, the hinge 800 includes a hinge plate 804 containing fastener aperture 803 to install the hinge plate 804 and hinge 800 in the transition block 200 of the invention. <b>In such an installation, a fastener passes through aperture 203 through shim 700 and transition block 200 into the jamb (not shown).</b> The upper hinge 810 is installed in the door edge. The door comprises the upper hinge 810 that rests upon pin 802 of the hinge 800. After the hinge, shim and block are assembled in the door and jamb respectively, the upper hinge 810 (see Figures 11 and 12) is supported by the lower hinge 800 and hinge pin 802. Hinge pin 802 is inserted into the barrel or upper portion 811 of the two knuckle hinge 810 of the invention. Depending on the perspective of the view, the upper portion 810 on the door is placed over the hinge pin 802 or the pin 802 is inserted into the barrel or upper (or insert) portion 811 of the upper portion hinge 810. Once inserted, the upper portion 810 on the door can rotate upon pin 802 in the jamb through the full motion required in appropriate door operation. Pin 802 is assembled into the lower portion 804 of the two knuckle hinge 800 of the invention using the pin support 801. The pin support 801 surrounds the pin 802 and provided an installation location for a height adjustment means 805 that adjusts the height of the door or the y-axis of the door for appropriate installation purposes.[11:16-12:2]
(iii) an adjustable hinge positioned adjacent to the shim, the adjustable hinge being adjustable in the vertical direction.	In Figure 8, the hinge 800 includes a hinge plate 804 containing fastener aperture 803 to install the hinge plate 804 and hinge 800 in the transition block 200 of the invention. In such an installation, a fastener passes through aperture 203 through shim 700 and transition

	<p>block 200 into the jamb (not shown). The upper hinge 810 is installed in the door edge. <b>The door comprises the upper hinge 810 that rests upon pin 802 of the hinge 800. After the hinge, shim and block are assembled in the door and jamb respectively, the upper hinge 810 (see Figures 11 and 12) is supported by the lower hinge 800 and hinge pin 802.</b> Hinge pin 802 is inserted into the barrel or upper portion 811 of the two knuckle hinge 810 of the invention. Depending on the perspective of the view, the upper portion 810 on the door is placed over the hinge pin 802 or the pin 802 is inserted into the barrel or upper (or insert) portion 811 of the upper portion hinge 810. Once inserted, the upper portion 810 on the door can rotate upon pin 802 in the jamb through the full motion required in appropriate door operation. Pin 802 is assembled into the lower portion 804 of the two knuckle hinge 800 of the invention using the pin support 801. <b>The pin support 801 surrounds the pin 802 and provided an installation location for a height adjustment means 805 that adjusts the height of the door or the y-axis of the door for appropriate installation purposes.</b> [11:16-12:2]</p>
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## 6.   **GROUNDS OF REJECTION TO BE REVIEWED ON APPEAL**

Claims 1-3 and 8-15 stand rejected under 35 U.S.C. § 103(a) as being unpatentable over *Headrick* (U.S. Patent No. 5,136,814) in view of *Fehr* (U.S. Patent No. 6,138,413), *Hellstrom et al.* (U.S. Patent No. 4,381,580), and *Snyder* (U.S. Patent No. 5,752,291). Claims 4-7 and 40-44 stand rejected under 35 U.S.C. § 103(a) as being unpatentable over *Headrick* in view of *Fehr*, *Hellstrom et al.*, and *Snyder*, and further in view of *Taber* (U.S. Patent No. 5,686,040). Claims 47 and 48 stand rejected under 35 U.S.C. § 103(a) as being unpatentable over *Headrick* in view of *Fehr*, *Hellstrom et al.*, and *Kurtz* (U. S. Patent No. 4,639,971).

## 7. ARGUMENT

### A. Claims 1-3 and 8-15 stand rejected as being unpatentable over *Headrick* in view of *Fehr, Hellstrom et al.*, and *Snyder*.

The final Office Action maintained the rejection of claims 1-3 and 8-15 under 35 U.S.C. § 103(a) as being unpatentable over *Headrick* in view of *Fehr, Hellstrom et al.*, and *Snyder*. The basic test for non-obvious subject matter is whether the claimed subject matter would have been obvious to a person having ordinary skill in the art to which the subject matter pertains in view of the prior art. The United States Supreme Court in *Graham v. John Deere & Co.*, 383 U.S. 1 (1966), set forth the factual inquiries to be considered:

- (1) determining the scope and contents of the prior art;
- (2) ascertaining the differences between the prior art and the claims at issue;
- (3) resolving the level of ordinary skill in the pertinent art.

In determining the scope and content of the prior art, the Examiner must first consider the nature of the problem on which the inventor was working. Once this has been established, the Examiner must select, for purposes of comparing and contrasting with the claims at issue, prior art references that are reasonably pertinent to that problem (e.g., the inventor's field of endeavor). See *Heidelberger Druckmaschinen AG v. Hantscho Commercial Products, Inc.*, 21 F.3d 1068, 1071 (Fed. Cir. 1994). In selecting and applying/combining references, hindsight must be avoided at all costs.

The second factor described in *Graham* requires ascertaining the differences between the cited prior art and the claims at issue. In the instant case, the references fail to disclose the claimed invention, that is, claimed elements are absent, i.e. there are differences between the cited art and the claim. The Examiner failed to identify these differences as required.

In resolving the level of ordinary skill in the pertinent art, as required by the third factor of Graham, the Examiner must place himself in the shoes of a person of ordinary skill in the art at the time the invention was made. The hypothetical person skilled in the art is one who thinks along lines of conventional wisdom in the art and one who does not have the benefit of hindsight.

In order to establish a *prima facie* case of obviousness, it is necessary for the Examiner to present evidence, preferably in the form of some teaching, suggestion, incentive, or inference in the applied prior art, or in the form of generally available knowledge that one having ordinary skill in the art would have been led to combine the relevant teachings of the applied references in the proposed manner to arrive at the claimed invention. Ex parte Levengood, 28 USPQ2d 1300, 1301 (Bd. Pat. App. & Interf. 1993); Ashland Oil, Inc. v. Delta Resins & Refractories, Inc., 776 F.2d 281, 227 USPQ 657 (Fed. Cir. 1985). The legal conclusion of obviousness must be supported by facts or it cannot stand. See Graham. A rejection based on 35 U.S.C. § 103(a) therefore clearly must rest on a factual basis, and these facts must be interpreted without hindsight reconstruction of the invention from the prior art or “viewed after the event.” Goodyear Co. v. Ray-O-Vac Co., 321 U.S. 275, 279, 64 S.Ct. 593, 88 L.Ed. 721 (1944). The proper inquiry thus is whether bringing the references together was obvious and not, whether one of ordinary skill, having the invention before him, would find it obvious through hindsight to construct the invention. Accordingly, an Examiner cannot establish obviousness by locating references that describe various aspects of the pending application’s invention without also providing evidence of the motivating force that would lead one skilled in the art to do what the inventor has done.

The Examiner has failed to establish a prima facie case of obviousness as detailed in MPEP § 706.01(j):

To establish a prima facie case of obviousness, three basic criteria must be met. First, there must be some suggestion or motivation, either in the references themselves or in the knowledge generally available to one of ordinary skill in the art, to modify the reference or to combine reference teachings. Second, there must be a reasonable expectation of success. Finally, the prior art reference (or references when combined) must teach or suggest all the claim limitations. The teaching or suggestion to make the claimed combination and the reasonable expectation of success must both be found in the prior art and not based on applicant's disclosure. *In re Vaeck*, 947 F.2d 488, 20 USPQ2d 1438 (Fed. Cir. 1991).

A prima facie case of obviousness has not been established because there is no suggestion or motivation to combine the references. Furthermore, all the claim limitations are not disclosed or suggested by the combination of *Headrick*, *Fehr*, *Hellstrom et al.*, and *Snyder*.

Throughout prosecution, the Appellants argued that the burden of presenting a prima facie case of obviousness has not been met by the Examiner as required. Specifically, the references applied lack the motivation to combine any of their separate teachings to reach the claimed door system. These arguments regarding the lack of motivation to combine have never been addressed by the Examiner, who instead has relied upon the piecemeal individual disclosures of each cited reference. The Examiner has failed, even after repeated requests by the Appellants, to provide a teaching or suggestion in any of the references that would support the proposed combination. Instead, the Examiner highlights in the Final Office Action that the rationale to modify the prior art "may be reasoned from knowledge generally available to one of ordinary skill in the art." However, this reasoning is improper to establish proper support for an obviousness rejection based upon a combination of references. The Examiner must establish a



prima facie case of obviousness, which has never been accomplished in the presently appealed application.

Under MPEP 2142, the burden of establishing a prima facie case of obviousness is initially placed on the Examiner and shifts to an Applicant once a prima facie case has been established. After the initial assertion of a prima facie case of obviousness, if the Applicant then provide evidence that a prima facie case of obviousness does not exist, the burden to prove the existence of a prima facie case of obviousness shifts back to the Examiner. In the present application, the Appellants timely and adequately traversed the Examiner's assertion of a prima facie case of obviousness, and the burden shifted back to the Examiner to establish that a prima facie case of obviousness does exist.

The Appellants timely traversed the reasoning/rational supplied by the Examiner, and specifically detailed why the proposed combination of *Fehr* and *Headrick* is improper and why such a combination fails to establish a prima facie case of obviousness. Specifically, the Appellants argued that *Fehr* provides a form fit, mitered seal joined together by fusion welding and that *Headrick* provides an end cap assembly, which could only incorporate a seal by accommodating the end cap in the bottom of the jamb that protrudes beyond the end of the *Headrick* assembly. The form fitting seal of *Fehr* cannot accommodate the protrusion in *Headrick* without modification, which is not taught or shown in either *Fehr* or *Headrick*. Additionally, the modifications required to fit the seal of *Fehr* onto the end cap assembly of *Headrick* would render the seal of *Fehr* unsatisfactory for its intended purpose, which is explicitly prohibited under MPEP § 2143.01. Since the function of *Fehr* is to seal against the sill, combining *Fehr* with *Headrick* would prevent the end cap of *Fehr* from engaging the sill and

therefore no seal could be realized. These problems with the proposed combination of *Headrick* and *Fehr* have never been addressed by the Examiner.

In response, the Examiner referred the Appellant to *Taber* (a reference that was not used in the rejection of independent claims) for such prima facie motivation. However, *Taber* entirely fails to disclose a teaching or suggestion to support the Examiner's modification of the seal of *Fehr* to accommodate the end cap of *Headrick*. *Taber* instead discloses a method of producing closure gaskets that seal differently than *Fehr*, that would not operate in place of the seal in *Fehr*, and that fail to disclose the end cap accommodation required to fit onto *Headrick*.

The Examiner made final the rejections based upon the cited references and failed to provide a teaching or suggestion of how the mitered form fitting seal of *Fehr* could accommodate the protruding end cap of *Headrick* without rendering *Fehr* unsatisfactory for its intended purpose. Thus, the Examiner failed to satisfy his burden of establishing that a prima facie case of obviousness to make such combination in fact exists. Since the Examiner failed to meet his burden of establishing a prima facie case of obviousness, the final rejections under 103(a) are improper and should be overturned.

**B. Claims 4-7 and 40-44 stand rejected as being unpatentable over *Headrick* in view of *Fehr*, *Hellstrom et al.*, and *Snyder* and further in view of *Taber*.**

Claims 4-7 and 40-44 stand rejected under 35 U.S.C. § 103(a) as being unpatentable over *Headrick* in view of *Fehr*, *Hellstrom et al.*, and *Snyder*, and further in view of *Taber*. Claims 4-7 are dependent upon claim 1 and are thus allowable as inheriting the allowable characteristics of the independent claims as discussed above. With respect to independent claim 40, the Examiner states that utilizing the economical method of depositing additional material onto a gasket is taught in *Taber* and that one of ordinary skill in the art would be motivated to place a seal in the

tank of the groove in the end cap of *Headrick*. Appellants have been unable to find any teaching whatsoever in *Taber* or *Headrick* to support these assertions. None of the cited art discloses a water tank sealed by a sealing element positioned between the end cap corner key and the water tank. If a sealing element were to be positioned between the profile of *Fehr* and the end cap of *Headrick*, the end cap of *Headrick* would be rendered inoperable as demonstrated by the following discussion.

*Headrick* teaches a frame member 12 having a channel 13 and gutter 27. The channel 13 and gutter 27 are in fluid communication with a trough 42 in the end cap 36 so that rainwater collected in the channel and gutter flows freely into the end cap trough 42. [5:14-6:59-63] *Headrick* teaches away from positioning a sealing element between the frame member 12 and the end cap 36. Rather, to function properly, *Headrick* requires fluid communication between the frame member 12 and the end cap 36. Thus, as *Headrick* teaches away from sealing between the end cap and frame, *Taber* does not appear to provide any rationale whatsoever to motivate one of ordinary skill in the art to place the seal detailed therein between the tank in the groove of the end cap of *Headrick*. There simply cannot logically be a motivation to perform a useless and function destroying combination. Accordingly, the Appellants continue to aver that the rejection of claim 40 is improper and should be overturned. Claims 41-44 are allowable as dependent on allowable independent claim 40.

C. **Claims 47 and 48 stand rejected as being unpatentable over *Headrick* in view of *Fehr*, *Hellstrom et al.*, and *Kurtz*.**

Claims 47 and 48 stand rejected under 35 U.S.C. § 103(a) as being unpatentable over *Headrick* in view of *Fehr*, *Hellstrom et al.*, and *Kurtz*. The Examiner maintained as final this rejection of independent claim 47 and dependent claim 48 based upon the same combination of

references discussed above, *Fehr* and *Hellstrom et al.* However, as detailed above, the Examiner has failed to provide a prima facie case of obviousness for combining the references of *Fehr* and *Hellstrom et al.* to reach claim 47. Accordingly, as discussed in detail above, the Examiner's failure to satisfy his burden of a prima facie case of obviousness renders rejections based upon this combination of references improper. Accordingly, the rejection of claims 47 and 48 should be overturned.

**8. CLAIMS APPENDIX**

A Claims Appendix detailing the claims involved in the Appeal is attached hereto beginning at page 19.

**9. EVIDENCE APPENDIX**

No additional evidence has been provided with the filing of this Substitute Amended Appeal Brief.

**10. RELATED PROCEEDINGS APPENDIX**

Since there are no related appeals and interferences, no decisions have been rendered or attached in a related proceedings appendix.

### CONCLUSION

Claims 1-3 and 8-15 are not rendered obvious by *Headrick* in view of *Fehr, Hellstrom et al.* and *Snyder*. Claims 4-7 and 40-44 are not rendered obvious by *Headrick* in view of *Fehr, Hellstrom et al., Snyder* and *Taber*. Claims 47 and 48 are not rendered obvious over *Headrick* in view of *Fehr, Hellstrom et al.* and *Kurtz*.

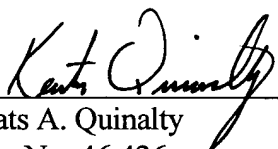
For the foregoing reasons, the rejections of claims 1-15, 40-44, 47 and 48 by the U.S. Patent and Trademark Office are in error. Reversal of the rejections and allowance of these claims is respectfully requested.

Respectfully submitted,

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## **CLAIMS APPENDIX**

1. (Rejected) An entryway system that can adjust a slab mounted within a frame and maintain a sealed system to exterior weather when closed, the entryway system comprising:
  - (a) the frame comprising a peripheral weather strip positioned substantially on the entirety of both sides and the bottom of the frame, the frame bottom additionally comprising a threshold member joined to the frame with an end cap corner key positioned between the frame and the threshold member, the threshold member forming a tank such that the threshold member can accumulate and drain environmental water to the exterior of the frame; and
  - (b) the slab including an adjustable hinge, said hinge being vertically and horizontally adjustable to sealingly match the slab periphery to the peripheral weather strip.
2. (Rejected) The system of claim 1 wherein the weather strip is positioned on the top of the frame.
3. (Rejected) The system of claim 1 wherein the weather strip is a V-shaped resilient weather strip having a base, the base of the V-shaped weather strip being configured as a hinge member for permitting sealing compression of the weather strip.
4. (Rejected) The system of claim 1 wherein the end cap corner key is a first end cap corner key, and wherein the threshold member comprises an extruded aluminum threshold member having a drain exposed to the exterior, the threshold member having first and second open ends,

the first open end being sealed with the first end cap corner key and the second open end being sealed with a second end cap corner key, each of the end cap corner keys comprising:

- (a) a sealing element to prevent water leakage from the open ends of the threshold member;
- (b) a flange extending from the end cap corner key and positioned to support the sides of the frame; and
- (c) a positioning structure configured to sealingly position the end cap corner key at the open end of the threshold member.

5. (Rejected) The system of claim 4 wherein the sealing element of the end cap corner key is a resilient seal.

6. (Rejected) The system of claim 4 wherein the sealing element of the end cap corner key is a polymeric elastomer seal.

7. (Rejected) The system of claim 6 wherein the polymeric elastomer seal comprises a foamed polymeric elastomer seal.

8. (Rejected) The system of claim 1 wherein the adjustable hinge includes a shim configured to horizontally adjust the slab to sealingly match the slab periphery to the peripheral weather strip.

9. (Rejected) The system of claim 8 wherein the shim of the adjustable hinge is positioned within the sash.
10. (Rejected) The system of claim 8 wherein the shim of the adjustable hinge is positioned within the jamb.
11. (Rejected) The system of claim 8 wherein adjustable hinge includes a mechanical adjustment configured to vertically adjust the slab to sealingly match the slab periphery to the peripheral weather strip.
12. (Rejected) The system of claim 1 wherein the adjustable hinge comprises a two-knuckle hinge.
13. (Rejected) The system of claim 12 wherein the two-knuckle hinge has an upper knuckle and a lower knuckle, the upper knuckle being supported by a pin that is adjustable in the vertical dimension.
14. (Rejected) The system of claim 13 wherein the pin of the two-knuckle hinge is configured to move through an adjustment range of about 0.2 to 10 mm.
15. (Rejected) The system of claim 13 wherein the pin of the two-knuckle hinge is configured to move through an adjustment range of about 0.5 to 5 mm.



16. (Withdrawn) A threshold structure for an entryway door, the structure comprising an threshold assembly comprising a water drain system associated with a water tank, a weather strip associated with a mounting means for the weather strip, an interior base for a trim member, a trim member, the ends of the threshold assemblies sealed using a corner key end cap structure and a threshold gasket positioned therebetween to maintain the water tank integrity.
17. (Withdrawn) The threshold system of claim 16 wherein the threshold comprises extruded aluminum.
18. (Withdrawn) The threshold system of claim 16 wherein the trim member comprises a wooden member.
19. (Withdrawn) The threshold of claim 16 wherein the corner key end cap additionally comprises an extended support means and attachment means for a side jamb framing member.
20. (Withdrawn) The threshold of claim 16 wherein the water tank comprises a depth of less than about 25 millimeters that can maintain a water head with a depth of less than about 20 millimeters in response to a normal force from a wind velocity of  $60 \text{ km-sec}^{-1}$ .
21. (Withdrawn) The threshold of claim 16 wherein the sill gasket comprises a thermoplastic.

22. (Withdrawn) The threshold of claim 16 wherein the sill gasket comprises a foamed sill gasket.
23. (Withdrawn) The threshold of claim 16 wherein the interface between the corner key end cap and the side jamb framing and the interface between the corner key end cap and the threshold both contain sill gasket.
24. (Withdrawn) The threshold of claim 16 wherein the threshold comprises attachment means such that the corner key end cap can be assembled with the threshold and sill gasket using a fastener that interacts with the attachment means.
25. (Withdrawn) The threshold of claim 16 wherein the corner key comprises positioning means such that the corner key is fixed at a single location on the threshold with the fastener.
26. (Withdrawn) An adjustable hinge for an entryway door system, the adjustable hinge comprising:
- (a) a shim assembly comprising a shim frame and at least one shim insert; and
  - (b) a two knuckle hinge with an upper knuckle and a lower knuckle, the upper knuckle supported and hingedly mounted on a pin extending vertically from the lower knuckle, the pin having adjustment means in the vertical direction.
27. (Withdrawn) The hinge of claim 26 wherein the shim has a thickness of at least 1 millimeter.

28. (Withdrawn) The hinge of claim 26 wherein the hinge system comprises a shim base and two or more shims.
29. (Withdrawn) The hinge of claim 26 wherein the shim frame comprises a peripheral edge stop holding the shim with the frame.
30. (Withdrawn) The hinge of claim 26 wherein the hinge frame is a rectangular frame adapted for installation into a rectangular opening in a door frame structure.
31. (Withdrawn) The hinge of claim 30 wherein the hinge frame has a thickness of about 1 to 3 millimeters.
32. (Withdrawn) The hinge system of claim 26 wherein the adjustable pin is adjustable through a range of about 0.1 to about 6 centimeters using a screw adjustment.
33. (Withdrawn) The hinge system of claim 26 wherein the adjustable screw driven by an Allen wrench.
34. (Withdrawn) A threshold system in an entryway system that can maintain a seal of an interior space to weather from an exterior, the threshold system comprising:
- (a) threshold having a tank and a drain exposed to the exterior;
  - (b) a jamb; and
  - (c) an end cap corner key positioned between the jamb and the threshold, said jamb

comprising sealing means between the end cap and the threshold that ensures integrity to a tank formed within the threshold sealed by the end cap;  
wherein the end cap comprises a support extending from the end cap corner key that forms a barrier to the passage of environmental water into the jamb, said end cap further comprising a alignment tab that cooperates with threshold to ensure the appropriate installation of the end cap corner key.

35. (Withdrawn) The threshold system of claim 34 wherein the threshold comprises extruded aluminum.

36. (Withdrawn) The threshold system of claim 34 wherein the end cap corner key comprises one or more fastener apertures and the alignment tab cooperates with the tread surfaces of the threshold.

37. (Withdrawn) The threshold system of claim 34 wherein a gasket is placed between the end cap corner key and the threshold.

38. (Withdrawn) The threshold system of claim 34 wherein the end cap corner key comprises a molded sealant placed such that the molded sealant contacts an open end of the threshold to form a watertight seal.

39. (Withdrawn) The threshold system of claim 34 wherein the end cap comprises a support extending beneath both the jamb and the threshold.

40. (Rejected) An entryway system that can adjust a slab within a frame and maintain a sealed system to exterior weather when closed, the system comprising an entryway comprising:

(a) the frame comprising a header, a threshold, an end cap corner key, and at least one jamb, the threshold including:

(i) a water tank configured to drain environmental water to the exterior of the frame; and

(ii) a sealing element positioned between the end cap corner key and the water tank to seal the water tank; and

(b) the slab mounted on the frame, said slab comprising a mortised hinge arrangement,

said arrangement comprising a shim and a two-knuckle hinge, the two-knuckle hinge being adjustable in the vertical dimension.

41. (Rejected) The system of claim 40 wherein the two-knuckle hinge is horizontally adjustable using the shim.

42. (Rejected) The system of claim 41 wherein the shim is positioned in the slab.

43. (Rejected) The system of claim 41 wherein the shim is positioned in the jamb.

44. (Rejected) The system of claim 40 wherein the hinge is vertically adjusted by a mechanical adjustment, and is horizontally adjusted by the shim.

45. (Withdrawn) The threshold system of claim 16 wherein the threshold comprises aluminum.
46. (Withdrawn) The threshold system of claim 16 wherein the extruded trim member comprises a wooden member.
47. (Rejected) An entryway system comprising:
- (a) a frame including a header, side jambs, and a threshold, each of the header, side jambs, and threshold defining a perimeter, the threshold including a water tank configured to accumulate and drain environmental water to an exterior of the frame;
  - (b) first and second end caps secured to first and second ends of the threshold;
  - (c) a seal positioned along the perimeter of the frame;
  - (d) a door mounted on the frame, the door including a mortised hinge arrangement adjustable in a horizontal direction and a vertical direction to provide sealing contact between the door and the seal positioned along the perimeter of the frame, the mortised hinge arrangement including:
    - (i) a transition block mounted to the door;
    - (ii) a shim positioned adjacent to the transition block; and
    - (iii) an adjustable hinge positioned adjacent to the shim, the adjustable hinge being adjustable in the vertical direction.
48. (Rejected) The entryway system of claim 47 wherein the transition block includes an insert aperture and the shim includes a tab extending from an edge of the shim, the tab of the shim being positioned within the insert aperture of the transition block for temporarily securing the shim within the transition block.